



# Image Quality Evaluation of Ultrasound Scanner Apparatus and Method

## ABSTRACT

The apparatus and method for evaluating images for quality assurance parameters of ultrasound image scanners are described. The apparatus includes a digital computer with display output, a video frame grabber or direct image read-out interface from ultrasound scanner, a digital storage, and software. Using a transducer, an ultrasound scanner produces an image, of test objects or phantom, that is temporarily stored in scanner memory. The phantom image is transferred to the memory of the processing computer either by digitizing the video output of the scanner or reading directly by digital means from the scanner. The software enables the user to acquire the image by the above means; associate the images with information on scanner, operator, and expected performance standards and accuracies. As selected by user, the software evaluates scanner performance parameters and produces quantitative results, graphs, and reports for screen display and printer. The processed and inputted information is stored with the measurement set and images for future access. The software generates, using stored and current results, trend graphs of evaluated performance parameters.

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